DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MORRILL POND #2	Lake Area (ha): 11.29
Town: CANTERBURY	Maximum depth (m): 1.2
County: Merrimack	Mean depth (m): 0.4
River Basin: Merrimack	Volume (m^3) : 44000
Latitude: 43°19'30" N	Relative depth: 0.3
Longitude: 71°32'22" W	Shore configuration: 1.34
Elevation (ft): 487	Areal water load (m/yr): 32.12
Shore length (m): 1600	Flushing rate (yr^{-1}) : 82.00
Watershed area (ha): 794.0	P retention coeff.: 0.42
<pre>% watershed ponded: 0.6</pre>	Lake type: artificial

BIOLOGICAL:	6 February 2003	19 June 2002
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DOM. PHYTOPLANKTON (% TOTAL) #1	NO WINTER	DINOBRYON 90%
#2	PLANKTON COLLECTED	CHRYSOSPHAERELLA 3%
#3		UROGLENOPSIS 3%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		7.51
DOM. ZOOPLANKTON (% TOTAL) #1		KERATELLA 34%
#2		PROTOZOAN SPP. 19%
#3		
ROTIFERS/LITER		63
MICROCRUSTACEA/LITER		<1
ZOOPLANKTON ABUNDANCE (#/L)		126
VASCULAR PLANT ABUNDANCE		Very abundant
SECCHI DISK TRANSPARENCY (m)		1.0
BOTTOM DISSOLVED OXYGEN (mg/L)	13.9	8.2
BACTERIA (E. coli, #/100 ml) #1		2
#2		< 2
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:	"		MORRILL I		#2	
	6 Febru	uary 2003	19 .	June	2002	
DEPTH (m)	1.0		1.0			
pH (units)	6.0		6.3			
A.N.C. (Alkalinity)	6.3		4.8			
NITRATE NITROGEN	< 0.05		< 0.05			
TOTAL KJELDAHL NITROGEN	0.50		0.50			
TOTAL PHOSPHORUS	0.013		0.028			
CONDUCTIVITY (µmhos/cm)	99.5		59.0			
APPARENT COLOR (cpu)	60		90			
MAGNESIUM			0.89			
CALCIUM			2.4	,		
SODIUM			8.5			
POTASSIUM			< 0.40			
CHLORIDE	17		13			
SULFATE	7		3			
TN : TP	38		18			
CALCITE SATURATION INDEX			3.9			

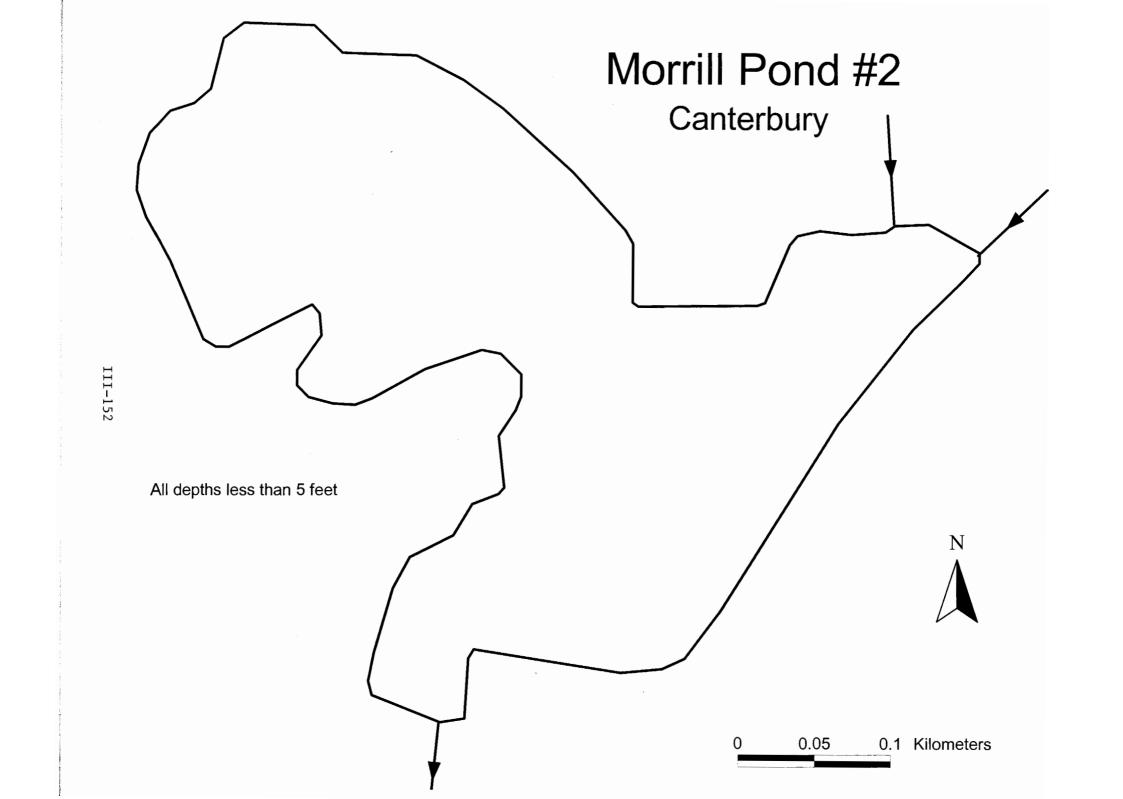
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O.	s.D.	PLANT	CHL	TOTAL	CLASS
**	5	6	1	12	Eutro.

COMMENTS:

- 1. Unimproved access over the bank for a canoe or small boat.
- 2. Road to access point was marked with a Fish & Game sign.
- 3. Pond was completely undeveloped.
- 4. Dam was recently re-built.
- 5. This is a dark tea-colored, shallow, eutrophic pond with very abundant rooted plant growth.



FIELD DATA SHEET

LAKE: MORRILL POND #2

DATE: 06/19/2002

TOWN: CANTERBURY

WEATHER: Sunny & calm

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	19.7	9.1	100 %
1.0	16.8	8.2	84 %
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SECCHI DISK (m): 1.0 COMMENTS:

BOTTOM DEPTH (m): 1.4

TIME: 1115

*Dissolved oxygen values are in mg/L

AQUATIC PLANT SURVEY

LAK	E: MORRILL POND #2	TOWN: CANTERBURY	DATE: 06/19/2002
Key	PLANT	PLANT NAME	
кей	GENERIC	COMMON	ABUNDANCE
В	Brasenia schreberi	Water shield	Abundant
W	Potamogeton	Pondweed	Common/Abun
′ Y	Nuphar	Yellow water lily	Common
P	Pontederia cordata	Pickerelweed	Abundant
N	Nymphaea	White water lily	Common/Abun
Т	Typha	Cattail	Common
R	Cyperaceae	Non-flowering sedge	Common
С	Ceratophyllum demersum	Coontail	Scattered
d	Dulichium arundinaceum	Three-way sedge	Sparse
е	Eleocharis	Spike rush	Scattered
G	Gramineae	Grass family	Sparse
U	Utricularia	Bladderwort	Sparse
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OVERALL ABUNDANCE: Very abundant

GENERAL OBSERVATIONS:

- 1. A very shallow pond with very abundant plant growth; only a couple of small patches of open water.
- 2. The western half of the pond was a wetland.